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10/535,200

05/17/2005

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EXAMINER

CHEN, YAN LU

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,200	Applicant(s) GRIMMINGER ET AL.	
	Examiner Yan Chen	Art Unit 2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/17/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flykt et al. Patent number: US 7,191,226 B2 (hereinafter Flykt) and further in view of Smith et al. Publication Number: US 2003/0088676 A1 (hereinafter Smith).

Regarding claim 1,

Flykt substantially teaches: A method for processing data packets which are transmitted in a data network which has a mobile function from a terminal (figure 1, mobile node (MN)) to a data source (figure 1, correspondent node (CN)) via a home computer (figure 1, home agent (HA)) of the data network (column 5, lines 50-57), wherein the terminal and the data source use a first network protocol (figure 1, IPvZ), in which addresses of the first network protocol are assigned to the terminal and to the data source, the addresses being represented in a first format, and the data network uses a second network protocol (figure 1, IPvY), in which addresses of the second network protocol are assigned to the computers in the data network, the addresses

being represented in a second format, wherein the addresses of the first network protocol can also be represented in the second format, comprising:

assigning the terminal to a home network, wherein the terminal in the home network receives a home address of the first network protocol, the home address being represented in the first format (column 3, lines 22-33, "home address assigned to mobile node");

processing, using the home computer, addresses of the first and the second network protocol, wherein the home computer assigns the home address which is represented in the second format to the terminal and the home address is converted into the first format in a conversion step (column 4, lines 48-67, "the home agent HA encapsulates ... an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]");

receiving at the terminal a second address of the second network protocol, the second address being represented in the second format, wherein the second address is the address in an external network outside of the home network the terminal is situated in the external network (column 2, lines 4-18 and column 5, lines 17-32 "mobile node MN is registered with the IPv4 foreign network 26"); and

adapting, a data packet, including the home address represented in the first format as a source address and the address of the data source represented in the first format as a destination address, such that the adapted data packet includes the second address represented in the second format as a source address and the address of the home computer represented in the second format as a destination address as well as

the address of the data source represented in the second format as a further address (column 3, lines 22-33, "data packets include two IP version of address"; column 4, lines 36-67, "an IPvY data packet destined to the mobile node's IPvY home address normally in an IPvY data packet IPvY[IPvY] and an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]").

Flykt does not explicitly disclose that the address in the packet as source address and destination address.

Smith teaches that data packet transferred in IP based system having a common addressing containing source IP address and destination IP address among other routing information (paragraph [0028]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Flykt and Smith before them at the time the invention was made to modify the packet of Flykt to include both source address and destination address as taught by Smith.

One of ordinary skill in the art would have been motivated to make this modification in order to track and identify the packet transferred in a network.

Regarding claim 2, Flykt and Smith teach the method according to claim 1, as described above.

Flykt further teaches that at least one of the adapting and conversion step is performed by a data transmission device which is connected to the terminal (column 4, lines 28-35, "Mobile node (MN) can be integrated combination of a small computer and

a cellular phone"; column 5, lines 47-57, "the IPv6 stack in the mobile node MN produces an IPv6 datagram and forwards it to the IPv4 stack in step 4-5. In step 4-6, the IPv4 stack encapsulates the original IPv6 packet into an IPv4 packet and sends the resulting packet IPv4[IPv6] for example to the home agent HA").

Regarding claim 4, Flykt and Smith teach the method according to claim 1, as described above.

Flykt further teaches that the data packet which was adapted is changed such that the changed data packet includes the home address represented in the first format as a source address and the address of the data source represented in the first format as a destination address, wherein the address of the data source represented in the first format is determined from the further address of the data packet which was adapted (column 5, lines 47-57, "the home agent HA that decapsulates the IPv4 packet and forwards the original IPv6 packet to the correspondent node CNv6 in step 4-7").

Regarding claim 5, Flykt and Smith teach the method according to claim 4, as described above.

Flykt further teaches that the data packet which was adapted is transmitted via the data network to the home computer and the changing of the data packet is performed by the home computer, wherein an assignment of the second address of the terminal to the home address is stored for the processing step in the home computer, and the data packet which was changed is then transmitted to the data source (column

5, lines 47-57, "sends the resulting packet IPv4[IPv6] for example to the home agent HA that decapsulates the IPv4 packet and forwards the original IPv6 packet to the correspondent node CNv6 in step 4-7").

Regarding claim 6, Flykt and Smith teach the method according to claim 1, as described above.

Flykt further teaches that the first network protocol is IPv4 with or without Mobile-IPv4 support and the second network protocol is IPv6 with Mobile-IPv6 support, or in which the first network protocol is IPv6 with Mobile-IPv6 support and the second network protocol is IPv4 with or without Mobile-IPv4 support (figure 6A-B).

Regarding claim 7, Flykt and Smith teach the method according to claim 6, as described above.

Flykt further teaches that the further address of the data packet which was adapted in the processing step is stored in the routing header of the data packet (column 6, lines 46, " 'Encapsulating Delivery style' extension header"; figure 7).

Regarding claim 8,

Flykt substantially teaches a method for processing data packets which are transmitted in a data network which has a mobile function from a data source to a terminal via a home computer of the data network, wherein the terminal and the data source use a first network protocol, in which addresses of the first network protocol are

assigned to the terminal and the data source, the addresses being represented in a first format, and the data network uses a second network protocol, in which addresses of the second network protocol are assigned to the computers in the data network, the addresses being represented in a second format, wherein the addresses of the first network protocol can also be represented in the second format, comprising:

assigning the terminal to a home network, wherein the terminal in the home network receives a home address of the first network protocol, the home address being represented in the first format (column 3, lines 22-33, "home address assigned to mobile node");

processing, using the home computer, addresses of the first and the second network protocol, wherein the home computer assigns the home address which is represented in the second format to the terminal and the home address is converted into the first format in a conversion step (column 5, lines 33-57, "The home agent HA intercepts the packet and encapsulates it in an IPv4 packet for the mobile node MN", "In the mobile node MN, the remaining IPv4 packet is decapsulated by an IPv4 stack and the original IPv6 packet is forwarded to an IPv6 stack for normal processing in step 4-4");

receiving at the terminal a second address of the second network protocol, the second address being represented in the second format, wherein the second address is the address in an external network outside of the home network if the terminal is situated in the external network (column 2, lines 4-18 and column 5, lines 17-32 "mobile node MN is registered with the IPv4 foreign network 26"); and

adapting a data packet, including the address of the data source represented in the first format as a source address and the home address represented in the first format as a destination address, such that the adapted data packet includes the address of the home computer represented in the second format as a source address and the second address of the terminal represented in the second format as a destination address as well as the address of the data source represented in the second format as a further address (column 3, lines 22-33, "data packets include two IP version of address"; column 4, lines 36-67, "an IPvY data packet destined to the mobile node's IPvY home address normally in an IPvY data packet IPvY[IPvY] and an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]").

Flykt does not explicitly disclose that the address in the packet as source address and destination address.

Smith teaches that data packet transferred in IP based system having a common addressing containing source IP address and destination IP address among other routing information (paragraph [0028]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Flykt and Smith before them at the time the invention was made to modify the packet of Flykt to include both source address and destination address as taught by Smith.

One of ordinary skill in the art would have been motivated to make this modification in order to track and identify the packet transferred in a network.

Regarding claim 9, Flykt and Smith teach the method according to claim 8, as described above.

Flykt further teaches that the data packet which is adapted is transferred from the data source to the home computer and adapting step is performed by the home computer, wherein an assignment of the second address to the home address of the terminal is stored for the adapting step in the home computer (column 5, lines 33-57, "The home agent HA intercepts the packet and encapsulates it in an IPv4 packet for the mobile node MN"; column 2, lines 4-18, "a COA of a MN is registered with its HA. The list of COAs is updated when the mobile node receives advertisements from foreign agents.").

Regarding claim 10, Flykt and Smith teach the method according to claim 8, as described above.

Flykt further teaches that the data packet which was adapted is changed such that the changed data packet includes the address of the data source represented in the first format as a source address and the home address represented in the first format as a destination address, wherein the address of the data source represented in the first format is determined from the further address of the data packet which was adapted (column 5, lines 33-57, "the home agent HA intercepts the packet and encapsulate it in an IPv4 packet for the mobile node's MN IPv6 address").

Regarding claim 11, Flykt and Smith teach the method according to claim 10, as described above.

Flykt further teaches that the data packet which was adapted is transmitted via the data network to a data transmission device which is connected to the terminal and the changing of the data packet is performed by the data transmission device, wherein the data packet which was changed is then transmitted from the data transmission device to the terminal (column 4, lines 28-35, "Mobile node (MN) can be integrated combination of a small computer and a cellular phone"; column 5, lines 47-49, "In the mobile node MN, the remaining IPv4 packet is decapsulated by an IPv4 stack and the original IPv6 packet is forwarded to an IPv6 stack for normal processing").

Regarding claim 13, Flykt and Smith teach the method according to claim 8, as described above.

Flykt further teaches that the first network protocol is IPv4 with or without Mobile-IPv4 support and the second network protocol is IPv6 with Mobile-IPv6 support, or in which the first network protocol is IPv6 with Mobile-IPv6 support and the second network protocol is IPv4 with or without Mobile-IPv4 support (figure 6A-B).

Regarding claim 14, Flykt and Smith teach the method according to claim 13, as described above.

Flykt further teaches that the further address of the data packet which was adapted is stored in the routing header of the data packet (column 6, lines 46, "

'Encapsulating Delivery style' extension header"; figure 7).

Regarding claim 15,

Flykt substantially teaches a data transmission device for processing data packets which are transmitted in a data network which has a mobile function from a terminal to a data source via a home computer of the data network, wherein the terminal and the data source use a first network protocol, in which addresses of the first network protocol are assigned to the terminal and to the data source, the addresses being represented in a first format, and the data network uses a second network protocol, in which addresses of the second network protocol are assigned to the computers in the data network, the addresses being represented in a second format, wherein the addresses of the first network protocol can also be represented in the second format, wherein

the terminal is assigned to a home network, wherein the terminal in the home network receives a home address of the first network protocol, the home address being represented in the first format (column 3, lines 22-33, "home address assigned to mobile node");

using the home computer, addresses of the first and the second network protocol are processed, wherein the home computer assigns the home address which is represented in the second format to the terminal and the home address is converted into the first format in a conversion step (column 4, lines 48-67, "the home agent HA encapsulates ... an Piz data packet destined to the mobile node's Piz home address in

an IPvY data packet IPvY[Piz]"; column 5, lines 47-57, "mobile node MN, the remaining IPv4 packet is decapsulated by an IPv4 stack");

at the terminal a second address of the second network protocol is received, the second address being represented in the second format, wherein the second address is the address in an external network outside of the home network if the terminal is situated in the external network (column 2, lines 4-18 and column 5, lines 17-32 "mobile node MN is registered with the IPv4 foreign network 26"); and

a data packet, including the home address represented in the first format as a source address and the address of the data source represented in the first format as a destination address, is adapted such that the adapted data packet includes the second address represented in the second format as a source address and the address of the home computer represented in the second format as a destination address as well as the address of the data source represented in the second format as a further address (column 3, lines 22-33, "data packets include two IP version of address"; column 4, lines 36-67, "an IPvY data packet destined to the mobile node's IPvY home address normally in an IPvY data packet IPvY[IPvY] and an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]").

Flykt does not explicitly disclose that the address in the packet as source address and destination address.

Smith teaches that data packet transferred in IP based system having a common addressing containing source IP address and destination IP address among other routing information (paragraph [0028]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Flykt and Smith before them at the time the invention was made to modify the packet of Flykt to include both source address and destination address as taught by Smith.

One of ordinary skill in the art would have been motivated to make this modification in order to track and identify the packet transferred in a network.

Regarding claim 16, Flykt and Smith teach the method according to claim 15, as described above.

Flykt further teaches that the data transmission device is a mobile device (column 4, line 32, "cellular telephone").

Regarding claim 17,

Flykt substantially teaches a data network which has a mobile function for transmitting data between data sources and terminals, wherein the data network is configured to perform the following:

assigning the terminal to a home network, wherein the terminal in the home network receives a home address of the first network protocol, the home address being represented in the first format (column 3, lines 22-33, "home address assigned to mobile node"):

processing, using the home computer, addresses of the first and the second network protocol, wherein the home computer assigns the home address which is

represented in the second format to the terminal and the home address is converted into the first format in a conversion step (column 4, lines 48-67, "the home agent HA encapsulates ... an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]"; column 5, lines 47-57, "mobile node MN, the remaining IPv4 packet is decapsulated by an IPv4 stack");

receiving at the terminal a second address of the second network protocol, the second address being represented in the second format, wherein the second address is the address in an external network outside of the home network if the terminal is situated in the external network (column 2, lines 4-18 and column 5, lines 17-32 "mobile node MN is registered with the IPv4 foreign network 26"); and

adapting a data packet, including the home address represented in the first format as a source address and the address of the data source represented in the first format as a destination address, such that the adapted data packet includes the second address represented in the second format as a source address and the address of the home computer represented in the second format as a destination address as well as the address of the data source represented in the second format as a further address (column 3, lines 22-33, "data packets include two IP version of address"; column 4, lines 36-67, "an IPvY data packet destined to the mobile node's IPvY home address normally in an IPvY data packet IPvY[IPvY] and an Piz data packet destined to the mobile node's Piz home address in an IPvY data packet IPvY[Piz]").

Flykt does not explicitly disclose that the address in the packet as source address and destination address.

Smith teaches that data packet transferred in IP based system having a common addressing containing source IP address and destination IP address among other routing information (paragraph [0028]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Flykt and Smith before them at the time the invention was made to modify the packet of Flykt to include both source address and destination address as taught by Smith.

One of ordinary skill in the art would have been motivated to make this modification in order to track and identify the packet transferred in a network.

Regarding claim 18, Flykt and Smith teach the method according to claim 17, as described above.

Flykt further teaches that a part of the data network is the Internet (column 1, lines 17-26, "internet subnetwork").

Regarding claim 19, Flykt and Smith teach the method according to claim 17, as described above.

Flykt further teaches that at least one of the home network and the external network is a wireless network which is based on GPRS and/or Wireless LAN and/or Bluetooth and/or UMTS and/or CDMA2000 (column 4, lines 24-26, "LAN, wireless").

3. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flykt and Smith as applied to claims 2 and 11 above, and further in view of Tjong et al. Publication Number: US 2003/0045316 A1 (hereinafter Tjong).

Regarding claim 3 and 12,

Flykt in view of Smith teach all the limitations of claims 2 and 11 for the reasons above.

Flykt in view of Smith does not explicitly disclose that the data transmission device is connected to the terminal via a (point-to-point) connection.

Tjong teaches client device is communicatively linked with a hosting device via point-to-point communication connection (see Tjong, paragraphs [0002] and [0048]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Flykt in view of Smith and Tjong before them at the time the invention was made to modify the connection between the data transmission device and the terminal of Flykt to use point-to-point communication connection as taught by Tjong.

One of ordinary skill in the art would have been motivated to make this modification in order enable communication between the transmission device and the terminal in view of Tjong (see Tjong, paragraph [0002]).

Conclusion

4. Examiner's Notes: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yan Chen whose telephone number is (571) 270-1926. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Yan Chen



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SUPERVISORY PATENT EXAMINER